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Alta Mesa Resources, Inc.

First Quarter 2018 Operational Update

May 14, 2018





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Reserve engineering is a process of estimating underground accumulations of hydrocarbons that cannot be measured in an exact way. The accuracy of any reserve estimate depends on the quality of available data, the interpretation of such data and price and cost assumptions made by reserve engineers. In addition, the results of drilling, testing and production activities may justify revisions of estimates that were made previously. If significant, such revisions could impact our strategy and change the schedule of any further production and development drilling. Accordingly, reserve estimates may differ significantly from the quantities of oil and natural gas that are ultimately recovered. Estimated Ultimate Recoveries, or "EURs," refers to estimates of the sum of total gross remaining proved reserves per well as of a given date and cumulative production prior to such given date for developed wells. These quantities do not necessarily constitute or represent reserves as defined by the SEC and are not intended to be representative of anticipated future well results of all wells drilled on our STACK acreage.

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This presentation has been prepared by us and includes market data and other statistical information from sources we believe to be reliable, including independent industry publications, government publications or other published independent sources. Some data is also based on our good faith estimates, which are derived from our review of internal sources as well as the independent sources described above. Although we believe these sources are reliable, we have not independently verified the information and cannot guarantee its accuracy and completeness.

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Alta Mesa Resources Key Investment Highlights

Leading Developer of STACK Oil Window

- Low cost, high return Meramec / Osage
- Drilled >300 Hz wells, transitioned to development
- Significant runway for capital efficient growth

Integrated Business Drives Value

- Contiguous acreage facilitates efficient operations
- Midstream infrastructure enhances returns
- Kingfisher Midstream positioned for significant growth

Strong Balance Sheet with Pre-Funded Growth

- Low leverage
- Liquidity to fund 2018 and 2019 growth
- Free cash flow positive by year end 2019

Strong Management Alignment with Investors

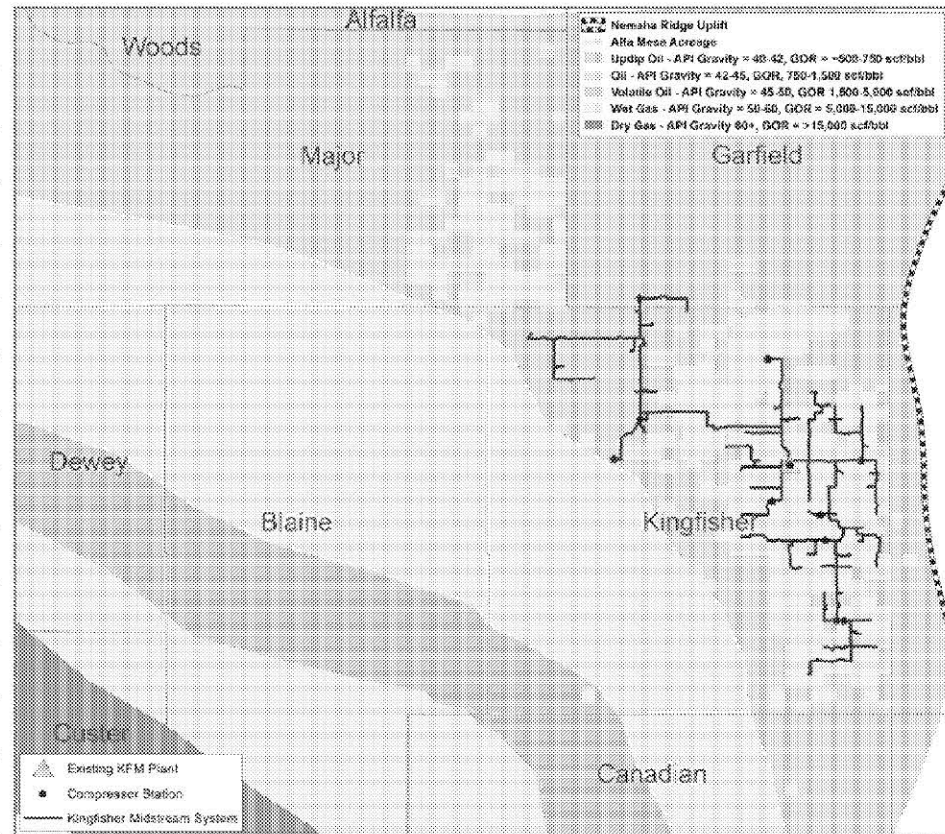
- Management ownership >10%
- Compensation tied to debt-adjusted per share metrics



Alta Mesa Resources Overview

Focused on development and consolidation in the STACK

Market Capitalization ¹	~\$3.1bn
Enterprise Value ¹	~\$3.4bn
Upstream Metrics	
Net STACK Surface Acres ²	~130,000
Q1 Net Production (BOE/D)	24,000
Q1 % Oil / % Liquids	53% / 70%
Single-well IRRs (Individual / Corporate) ³	80% / 98%
Operated STACK Hz. Wells Drilled ⁴	306
Current rig count	8
Kingfisher Midstream Metrics	
Gas Processing Capacity	350 ⁵ MMCF/D
Q1 Inlet Volumes	101 MMCF/D
Pipelines	400+ miles
Dedicated Acreage	~300,000 gross acres
Oil Storage Capacity	50,000 BBL



¹ Equity share price as of March 29, 2018 close, the last trading day in the quarter, using aggregate Class A and Class C share count of 382,774,730

² Acreage as of 5/8/2018

³ Mean IRR based on NYMEX close at 5/8/2018, calculated over economic life of wells

⁴ Horizontal wells drilled as of 5/8/2018

⁵ Includes existing 90 MMCF/D offtake processing



Recent Highlights

Successful completion of business combination and continued plan execution

- Completed business combination on February 9, creating pure-play STACK-focused company
- 1Q18 net production 24,000 BOE/D, a 24% increase from 1Q17
 - Exited March with net production of ~25,800 BOE/D
 - >260 wells producing, including 11 multi well pads
 - 16% gross operated horizontal production increase quarter over quarter
- 8th rig added in May to support full year plan
- Expanded Kingfisher Midstream leadership and business development team
- 200 MMCFD Kingfisher Midstream plant expansion placed in service in April
- Launched Cimarron Express crude pipeline to Cushing
- Ended quarter with \$261mm in cash for total liquidity in excess of \$700mm

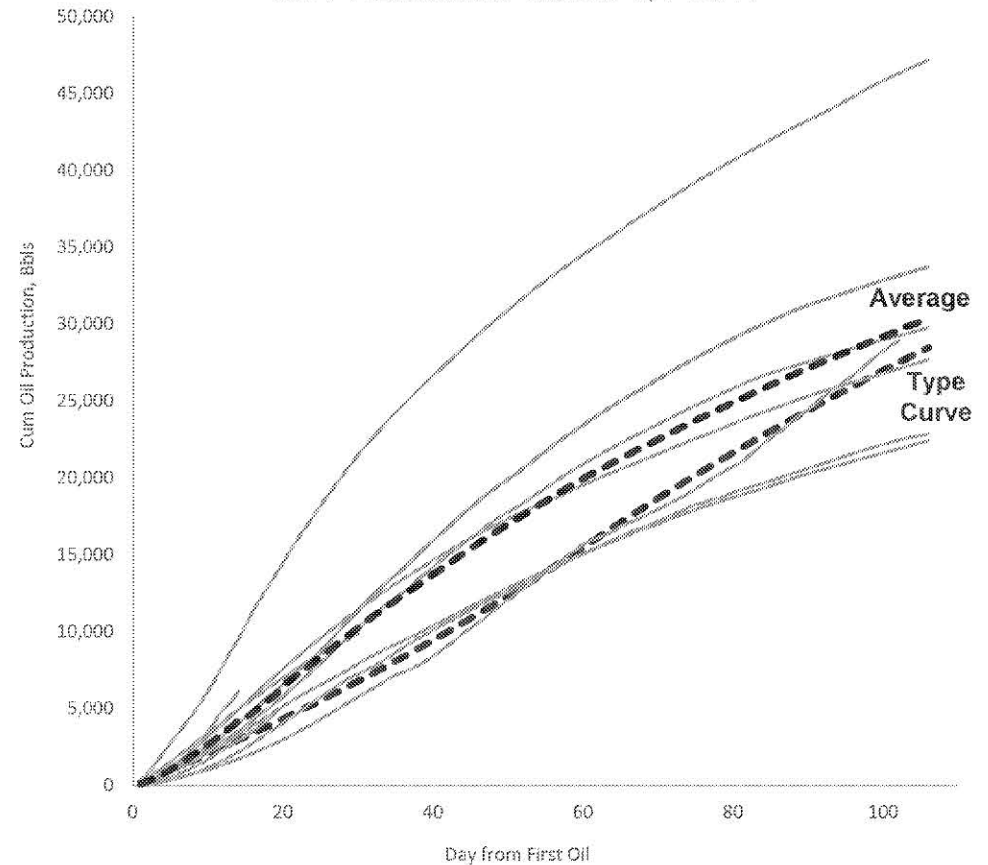


Development Patterns Underway

Multi-well development pattern results across field are favorable



10 Multi-Well Development Patterns on Production Since Q4 2017

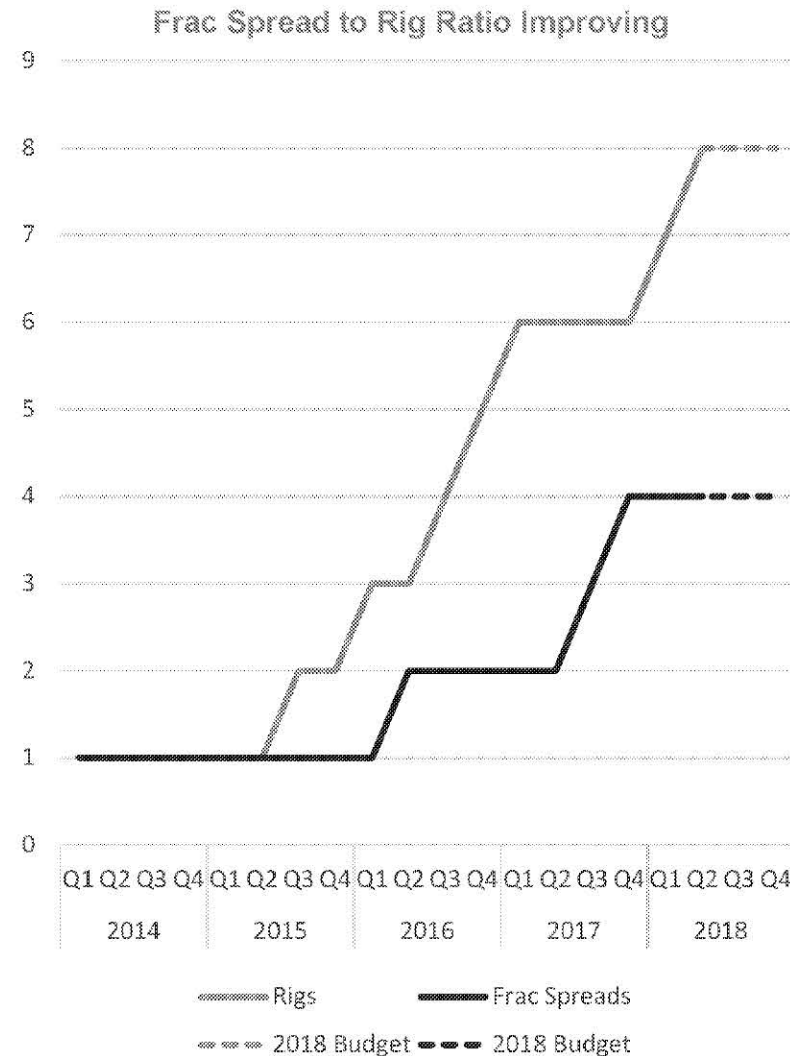




Transition from De-risk / Delineate to Development

Applied learning from pattern tests – 80% of 2018 plan on multi-well pads

- Early stages of long term pattern development of thick, naturally-fractured continuous Meramec & Osage across Alta Mesa's 300 sq. mi. position in the normally-pressured oil window
- Vision to recover at least 8% of oil in place, with 1,500' intra-bench spacing
- 2018 plan principally to drill multi-well pads
 - Moving into manufacturing mode with large queue of multi-well DSUs ready to execute
 - Budget designed to deliver 170+ wells for a total of 400+ Hz wells by year end
- Development program designed to maximize value by optimizing production, cash flow, infrastructure, and services
 - Bring production online faster
 - Utilize infrastructure for fresh water supply (drilling), SWD (LOE), and gas gathering

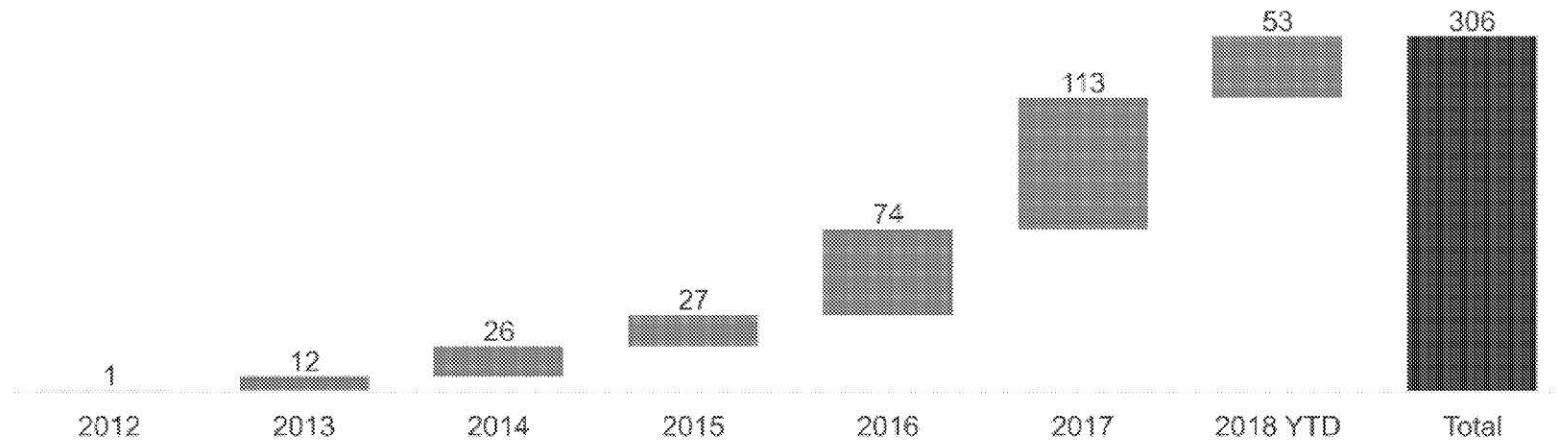




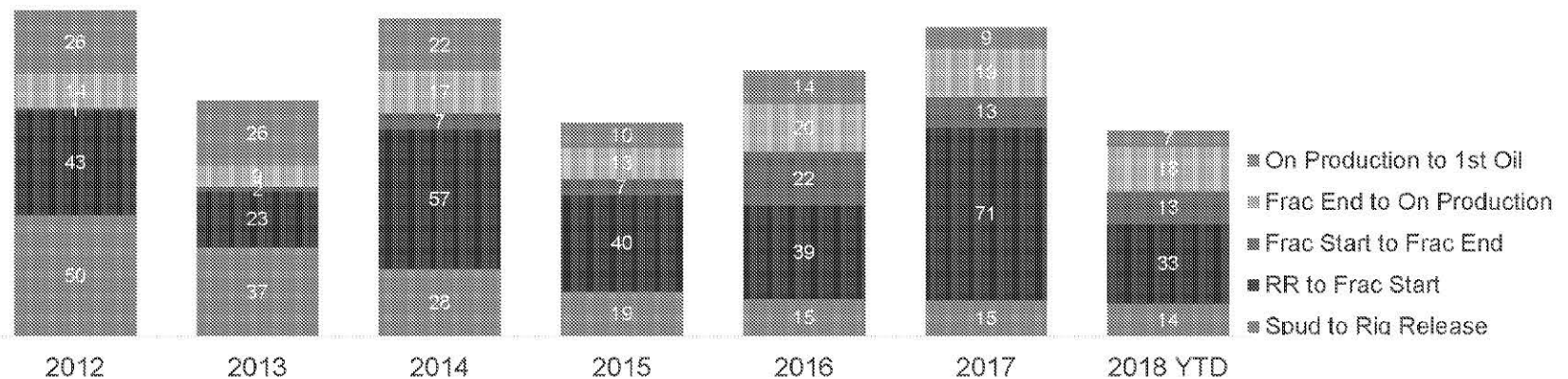
Operational Efficiencies Across Increasing Scale

Disciplined execution during ramp to development mode

Significant Acceleration in Wells Drilled as Transition to Development Continues¹



Timing from Spud to First Oil Improving with Transition to Increased Multi-Well Pad Drilling²



¹ Shows wells spud per year. 2018 YTD as of 5/8/2018

² 2018 YTD as of 5/8/2018



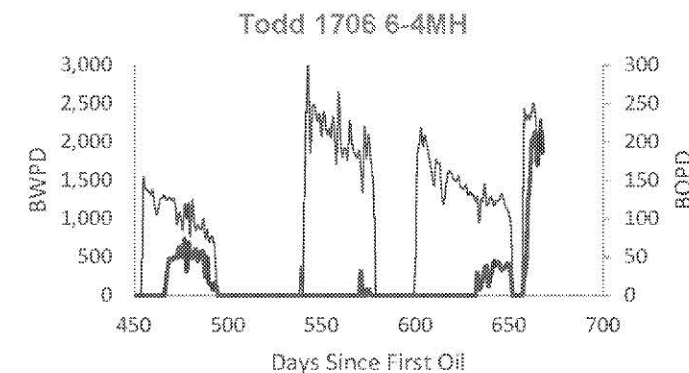
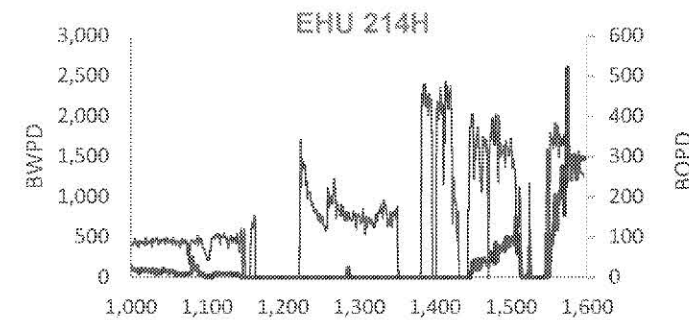
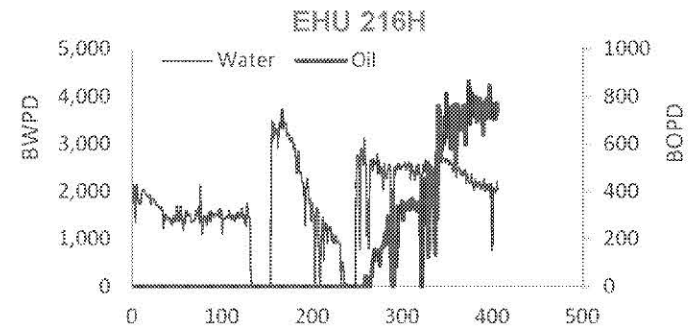
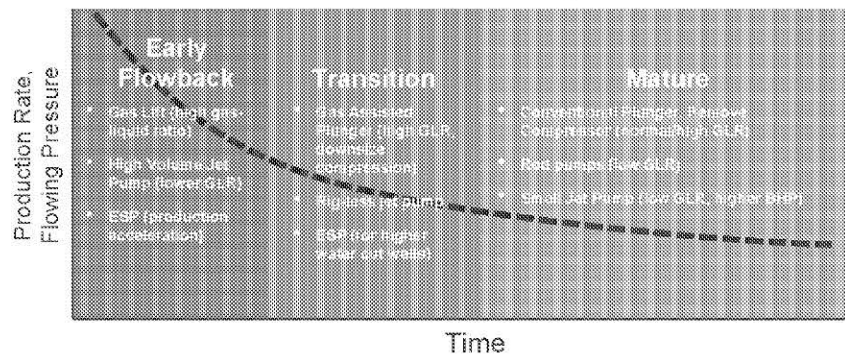
Production Optimization

Key driver to maximize ROI, EBITDA and optimize reserves

Improved Base Production: Key to Long-Term Value

- Disciplined internal artificial lift review process
- Every well reviewed daily by artificial lift team, lift parameters adjusted or lift method changed
- Gathering system pressure reduction in assessment with KFM
- Initial results reflect base decline rate mitigation
- Excellent early results from first 5 wells in an initial 25 well program, range 200-700 BOPD rate increase

Artificial Lift Lifecycle



Cimarron Express Overview

Connects STACK to Cushing with significant third party capacity



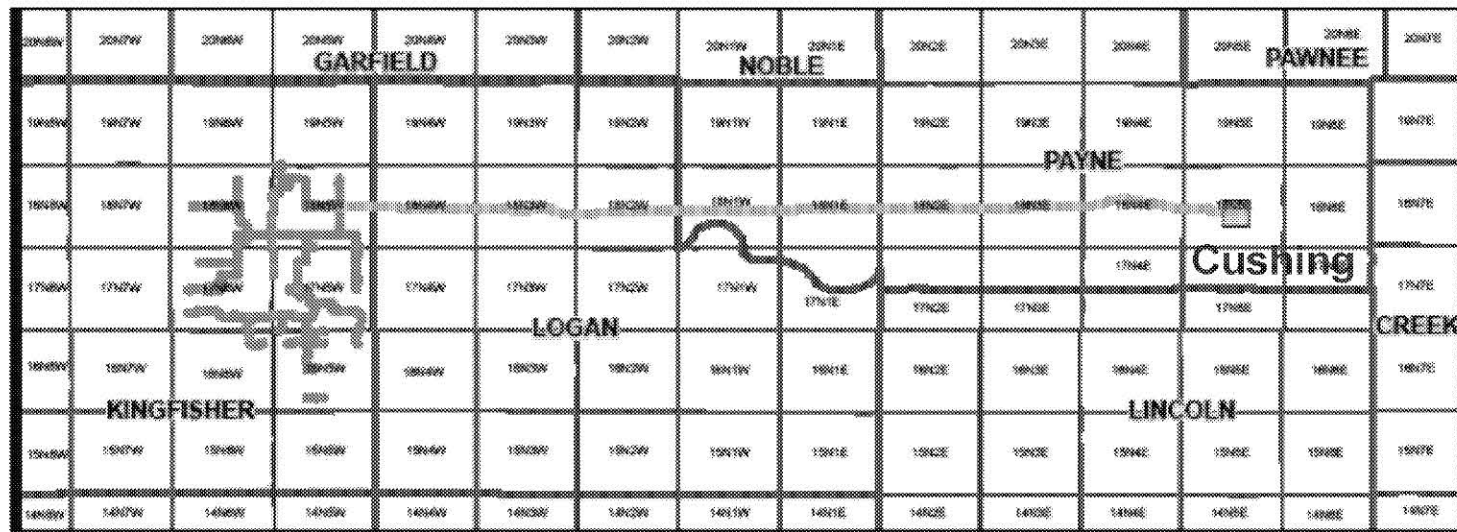
Strategic Rationale

- Provides Alta Mesa the ability to sell directly into Cushing
- Transitions Alta Mesa crude production from trucks to pipelines
- Differentiates KFM crude gathering system by having direct connection to Cushing
- Provides access to most downstream markets at Cushing without additional fees

Asset Overview

KFM Ownership	50%
Length	~65 miles
Pipeline Size	16"
Capacity	Initial: 90,000 bbls/d Expandable to: 175,000 bbls/d
AMR Acreage Dedication	~120,000 Net Acres in Kingfish and Garfield Counties
Expected In-service Date	Mid-2019

Pipeline Route



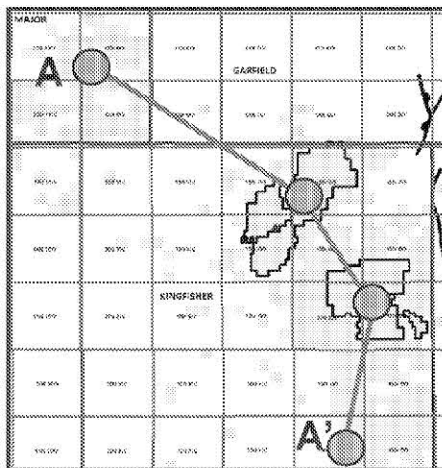
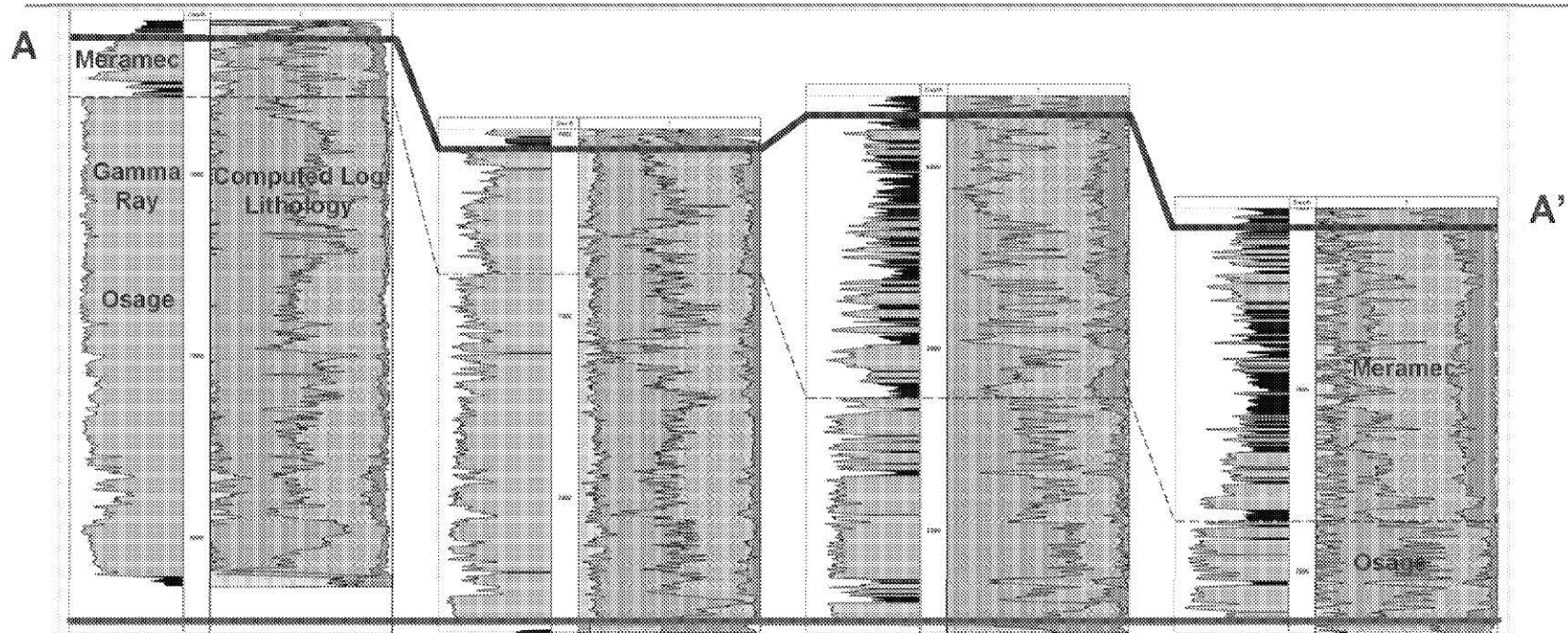
APPENDIX





Meramec/Osage Key Targeted Interval

Gamma Ray log does not properly characterize the true lithology



- Gamma ray measurement, if used as a lithology "quick-look" in carbonates/silts, does not adequately characterize STACK siliceous limestone/siltstone lithology
- High tier computed log lithology better describes the laminated siliceous limestone character of Meramec and Osage as seen in cores
- Nemaha uplift and faulting created the highly fractured, dual porosity system of high-quartz content rock in eastern Kingfisher County

Flattened on Woodford Shale

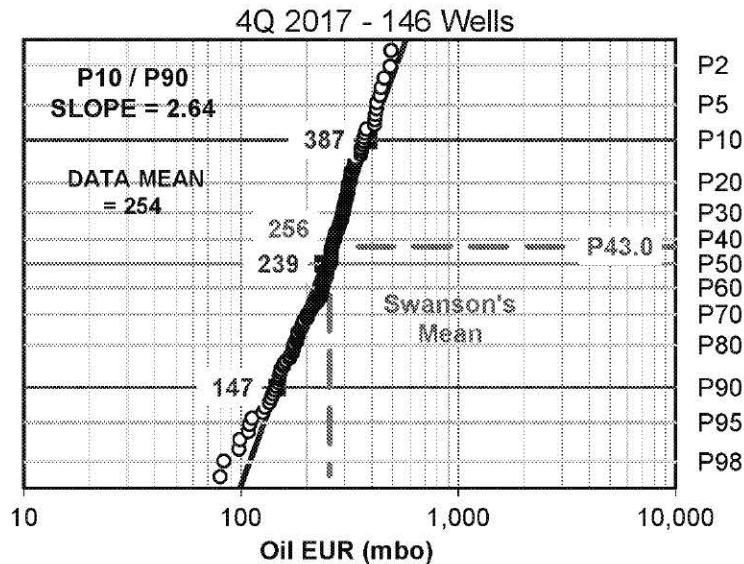
Computed Log Lithology





Consistent Well Results

Durable economics over time across acreage position



- YE 2017 reserves and type curve based on a mean distribution of 146 producing wells
- Geographical EUR distribution consistent
- EUR consistent/slightly increasing over time
- Individual mean well economics
 - IRR 80% @ NYMEX²
 - IRR 37% @ \$50/\$2.50
- Corporate mean well economics (including midstream)
 - IRR 98% @ NYMEX²
 - IRR 50% @ \$50/\$2.50
- 10% IRR at 95 MBO; below the P90

Area	EUR ¹ Avg, MBO	EUR ¹ Avg, MMCF	Lateral	# Wells	
Township 15N	267	1,959	4,724	18	Southern Area
Township 16N	249	1,962	4,660	14	
Township 17N	260	2,174	4,779	69	Central Area
Township 18N	251	1,806	4,646	20	Northern Area
Township 19N	224	757	4,438	23	
Township 20N	370	1,057	4,771	2	
Average YE17 Distribution	254	1,838	4,689	146	

	MBO	MMCF	2-phase MBOE	3-Phase MBOE ³	Well IRR	Corp IRR
Type Curve (mean well)	250	1,868	561	651	61%	76%
Normalized to 10,000 ¹	533	3,984	1,197	1,388		

¹ Technical EUR – Flat \$65/bbl, lowered fixed opex as gas lift compressor is removed

² Mean IRR based on NYMEX close at 5/8/2018, calculated over economic life of wells

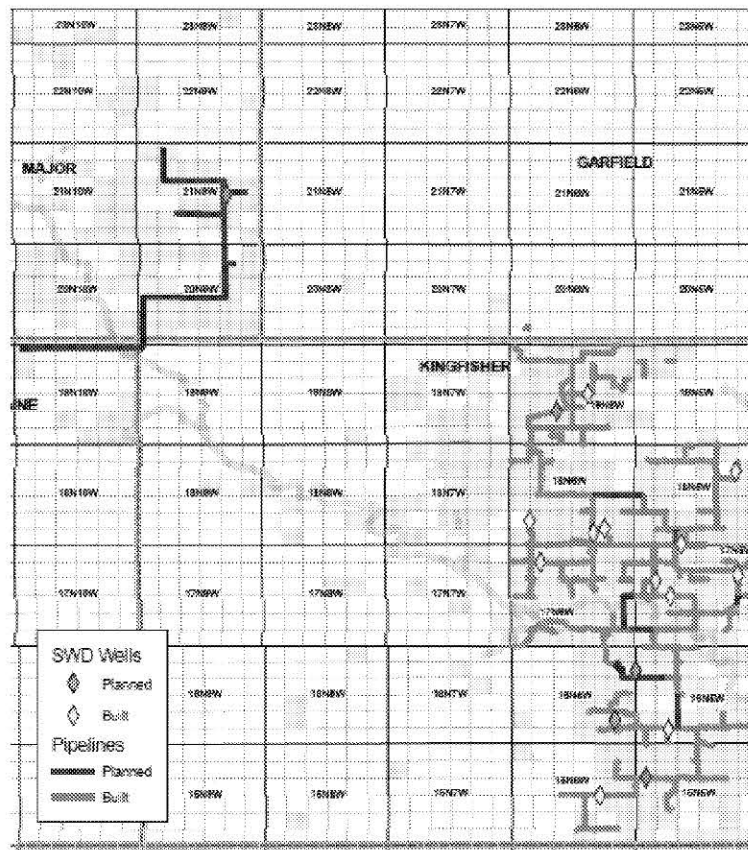
³ KFM processing, 15% shrink, 73 bbls/mmcf NGL Yield under ethane rejection



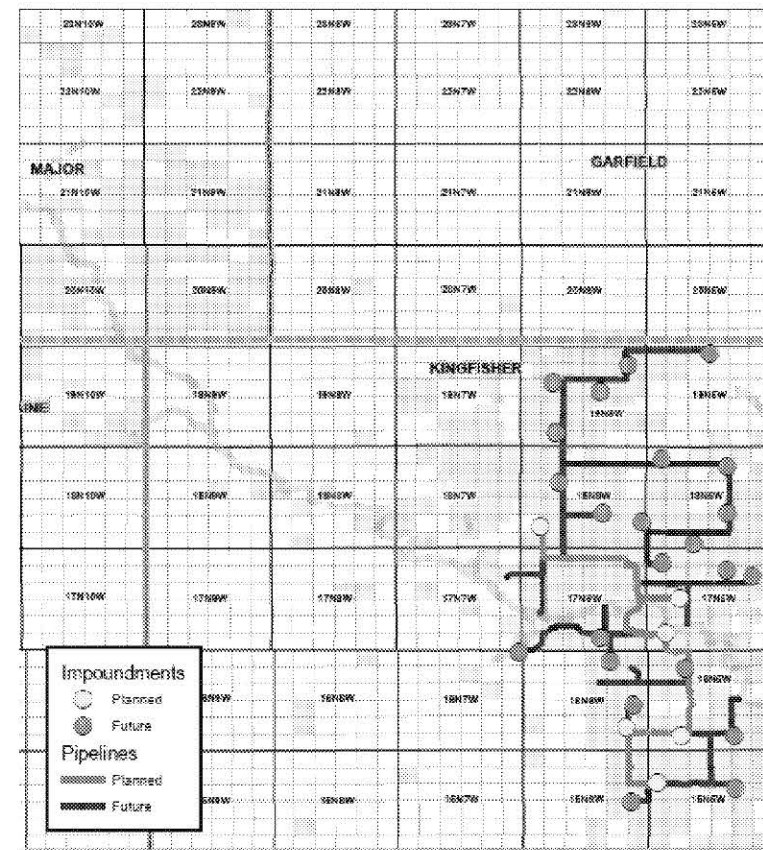
Water Systems

Assurance of supply and cost control in drilling & completions, LOE

SWD System
(production support)

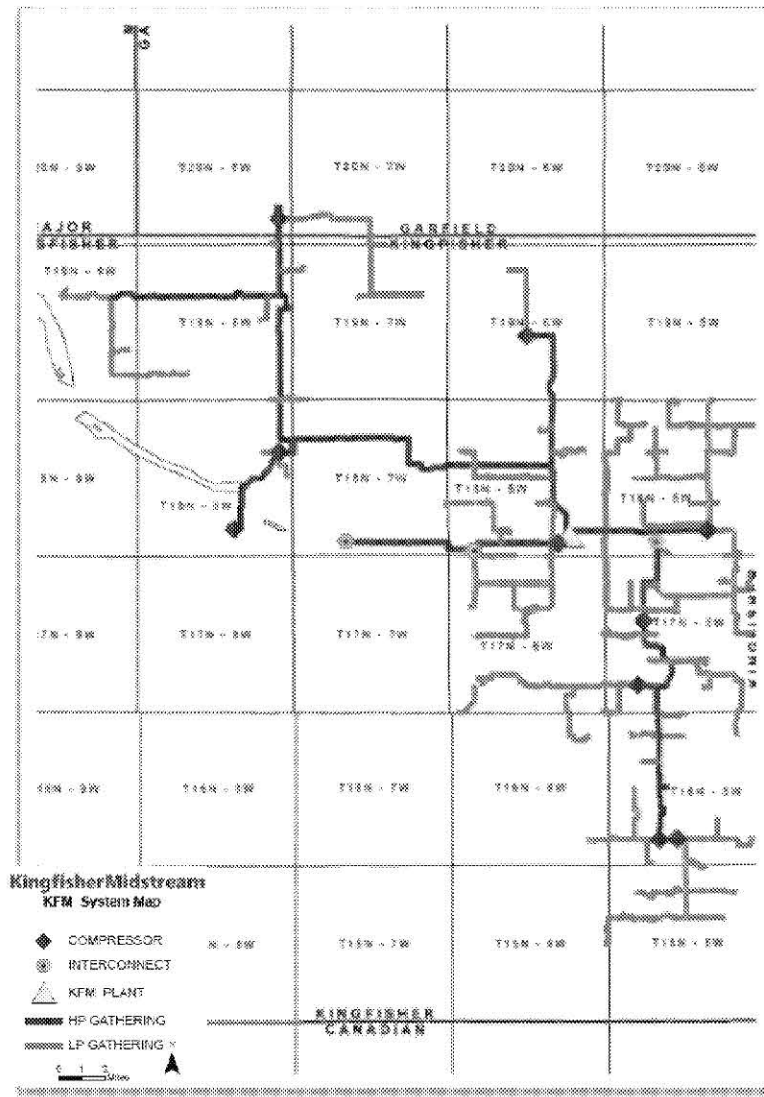


Supply Water System
(drilling and completion support)



Kingfisher Midstream System

Robust, expandable gathering and processing



Natural Gas Processing

- Current processing capacity of 350 Mmcf/d, inclusive of offtake agreements and 200 Mmcf/d Cryogenic plant in startup
- 1,200 Bbl/d condensate stabilizer

Low Pressure Pipeline

- ~309 miles of low-pressure crude and gas gathering lines¹
 - Natural gas gathering: 4"-16" pipeline
 - Crude gathering: 6"-12" pipeline

High Pressure Pipeline

- ~104 miles of 4"-16" rich gas transportation pipeline²
 - Average operating pressure of 1,100 psig and piggable
- 4 miles of 12" residue gas pipeline to PEPL
- 9 miles of 16" residue gas pipeline to OGT
- 4 miles of 6" NGL Y-grade pipeline, with 13,000 Bbl/d capacity to Chisolm Pipeline

Compression Facilities

- Field Compression:
 - 17 CAT 3516s (23,460 total HP)³
 - 3 CAT 3508s (2,070 total HP)
 - 1 CAT 3306 (203 HP)
- Inlet Compression:
 - 6 CAT 3606s (10,650 total HP)
- Residue Compression:
 - 3 CAT 3516s (4,140 total HP)
 - 5 CAT 3608s (12,500 total HP)⁴

Other Infrastructure

- 50,000 Bbl crude storage with 6 truck loading LACTS
- 3 NGL bullet tanks: 90,000 gallon capacity

Producer Connections

- 162 meters settled through December 2017

¹7 miles under construction. ²1 mile under construction. ³6 under construction. ⁴All under construction

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Q1 Realized Prices and Costs

	1Q'18
Average sales price per unit before hedging effects:	
Oil (per Bbl)	\$62.20
Natural Gas (per Mcf)	\$2.46
NGLs (per Bbl)	\$23.30
Average sales price per unit after hedging effects:	
Oil (per Bbl)	\$54.92
Natural Gas (per Mcf)	\$2.96
NGLs (per Bbl)	\$23.30
Costs:	
Operating Expenses (\$mm)	\$20.4
General and Administrative Expenses (\$mm)	\$54.8
<i>Non-cash/Non-recurring G&A (\$mm)¹</i>	<i>\$43.7</i>

¹ Business combination expenses and stock compensation expense included in General and Administrative Expenses line above